

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An X-ray examination apparatus which includes an X-ray source (11),
- an X-ray detector (13) including sensor elements for converting X-ray in electrical charges and a processing unit (2) for the correction of image data and a defect detection unit (3) for the detection of image defects that can be detected on the basis of image parameters that can be extracted from image data arising during clinical examinations and is suitable to adapt, in dependence on the detected image defects, the processing parameters (18-21) used in the processing unit (2), characterized in that for the detection of ~~notably~~ image defects caused by defective sensor elements the defect detection unit (3) includes
- a filter unit (37) for filtering the image data,
- and a unit (35) for averaging the filtered image data, and
- a comparison unit (36) for comparing the filtered and averaged image data with a threshold value in order to form a defect table identifying defective pixels in the image data, and for the sensor elements in dependence on the threshold value
- a processing unit (2) for correcting the defective pixels identified in the defect table by means of a correction table (20) to obtain corrected pixel values and applying the corrected pixel values to the image data from the X-ray detector (13).

2. (Original) An X-ray examination apparatus as claimed in claim 1, characterized in that the defect detection unit (3) is arranged to adapt status parameters of the X-ray examination apparatus.

3. (Original) An X-ray examination apparatus as claimed in claim 1, characterized in that continuous detection takes place.

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4. (Original) An X-ray examination apparatus as claimed in claim 1, characterized in that the filter unit (37) includes a ranking filter (31) for filtering the image data, an inverter (32) for inverting image data, and a summing unit (33) for summing the filtered and inverted image data, there also being provided a unit (34) for forming the absolute values of the summed image data.

5. (Original) An X-ray examination apparatus as claimed in claim 1, characterized in that the defect detection unit (3) is arranged to apply a corrected defect table to the processing unit (2) in the case of detection of defective sensor elements.

6. (Original) An X-ray examination apparatus as claimed in claim 1, characterized in that the threshold value is predetermined or can be defined adaptively by forming histograms of the image data subsequent to the unit (34) for forming the absolute value.

7. (Currently Amended) An X-ray examination apparatus as claimed in claim 4, characterized in that

the ranking filters filter (31) ~~have~~ has variable kernels (FIGS. 4 b, e).

8. (Currently Amended) A method of forming X-ray images with an X-ray examination apparatus as claimed in claim 1 ~~to 7~~.

9. (Currently Amended) A method as claimed in claim 8, characterized in that

the adaptation of the processing parameters is performed in stages, the adaptation being performed during operation in a first stage, whereas adaptation takes place in a standby mode of the X-ray examination apparatus in a second stage, and adaptation takes place by intervention by a user in a third stage.

10. (Currently Amended) A computer-readable medium for storing a computer program for the correction of image data, notably image defects caused by defective sensor elements, whereas a filtering (37) of clinical image data being performed by means of ranking filters (31) and the filtered data being averaged (35) and a defect table being formed for the sensor elements in dependence on a threshold value (36) comprising the steps of forming a defect table identifying defective pixels, correcting the defective pixels identified in the defect table by means of a correction table (20) to obtain corrected pixel values, and applying the corrected pixel values to the image data.